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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,085	03/30/2001	Warner George Harrison	99-845	8056

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EXAMINER	
MOHAMED, CHARIOUI	
ART UNIT	**PAPER NUMBER**
2857	

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/822,085	HARRISON, WARNER GEORGE	
	Examiner	Art Unit	
	Mohamed Charioui	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. **Fig. 1 and Fig. 2** are objected to because the boxes in the drawing need to be labeled.

The Examiner directs the applicant to 37 C.F.R. 1.84(n) and 1.84(o) which state, "Graphical drawing symbols may be used for conventional elements when appropriate" while "[o]ther symbols which are not universally recognized may be used, subject to approval by the Office" and that "[s]uitable descriptive legends may be used subject to approval by the Office, or may be required by the examiner where necessary for understanding of the drawing". Since the drawings in Figure 2 do not contain conventional elements, the Examiner may require descriptive legends for better understanding of the drawings. See MPEP 608.02.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15 and 17-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Westrom et al.

As per claims 1 and 14, Westrom et al. teach a method for estimating a location of an injection point of foreign signals in a network (see col. 1, lines 5-13 and col. 4, lines 42-47); obtaining a first signal sample at a first location in the network (see col. 4,

lines 54-65); obtaining a second signal sample at a second location in the network (see col. 5, lines 1-5); correlating the two signal samples; and establishing the location of the injection point from the correlation result (see col. 5, lines 5-10).

As per claims 2 and 3, Westrom et al. further teach calculating a propagation delay from the correlation result (see col. 5, lines 5-10); calculating an offset as being a function of the propagation delay (velocity of propagation) (see col. 8, lines 13-30); finding a midpoint between the first location in the network and the second location in the network; estimating the location of the injection point by locating a point that is a distance equal to the offset from the midpoint (see col. 8, lines 45-50).

As per claim 4, Westrom et al. further teach that the two signal samples are bandwidth limited (see col. 6, lines 3-17 and col. 9, lines 35-42).

As per claims 5 and 6, Westrom et al. further teach determining the magnitude of the ingress including measuring the amplitude of the correlation result (see col. 8, line 52 to col. 9, line 8).

As per claim 7, Westrom et al. further teach correlating the two samples further includes integrating the samples over time (i.e. Fast Fourier Transform technique) (see col. 9, lines 22-34).

As per claims 8-10, Westrom et al. further teach the first location in a network is a node (see col. 5, line 59 to col. 6, line 17).

As per claims 11-13 and 20, Westrom et al. further teach displaying the correlation result (see col. 8, lines 42-51).

As per claims 15 and 18, Westrom et al. further teach means for obtaining the first signal sample includes a probe, a link, and a means for sending and receiving data (see col. 6, lines 12-17 and col. 6, lines 34-45).

As per claims 17 and 19, Westrom et al. further teach that the means for sending and receiving data is a modem (see col. 6, lines 35-45).

As per claim 21, Westrom et al. further teach obtaining a first signal sample at the first location in the network includes obtaining a reference sample signal (see col.4, line 62 to col. 5, line 11).

As per claim 22, Westrom et al. further teach that the means for obtaining the second signal sample at a second location in the network includes a means for obtaining a reference signal sample (see col.4, line 62 to col. 5, line 11).

As per claims 23 and 24, Westrom et al. further teach establishing a location of a potential egress point at the location of the injection point (see col. 8, lines 13-30).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Westrom et al. in view of White.

Westrom et al. teach the system as stated above except that the link is a fiber-optic link.

White teaches that fiber-optic link is used to transmit and receive data (see Abstract; Fig. 1; and col. 1, lines 12-37). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate White's teaching into Westrom et al.'s invention, because it would provide better transmission and reception rates of the signals; furthermore, fiber-optic medium exhibits high bandwidth and low transmission loss; therefore, using fiber-optic link would improve the performance transmission and reception of the signals.

Prior art

4. The prior art made record and not relied upon is considered pertinent to applicant's disclosure:

Moisan et al. ['215] disclose method and device for measuring by correlation, in real time, the delays between matching electrical signals.

Kaplan ['717] discloses method and apparatus for measuring the time delay between signals.

Oda ['293] discloses correlation time-difference detector.

Meriaux et al. ['213] disclose correlation system for delay measurement.

Crom et al. ['245] disclose spectral correlation.

Hill ['545] disclose frequency domain reflection measurement device.

Contact information

5. Any inquiry concerning this communication from examiner should be directed to Mohamed Charioui whose telephone number is 703 605-4362. The examiner can normally be reached Monday to Friday 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached at 703 308-1677. The fax phone number for the organization where this application is assigned is 703 305-3431.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose number is 703 308-0956.

Mohamed Charioui

5/7/03

MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800